

Summary Status of Prototype & Cosmic Testing

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Hcal Meeting

January 26, 2016

General Status

- All inner and outer tiles have been tested with cosmics
 - Inner tiles in a box ready to be put into the assembly
- 150 SiPMs have wires attached ready to go (Megan needs to give Sal last 2 groups)
 - Will be added after installing tiles into the plates
- Plan for LEDs?

Inner Assembly Status

- Inner has outer skin
- Holes for inner skin done today
- Wedges cut ~done

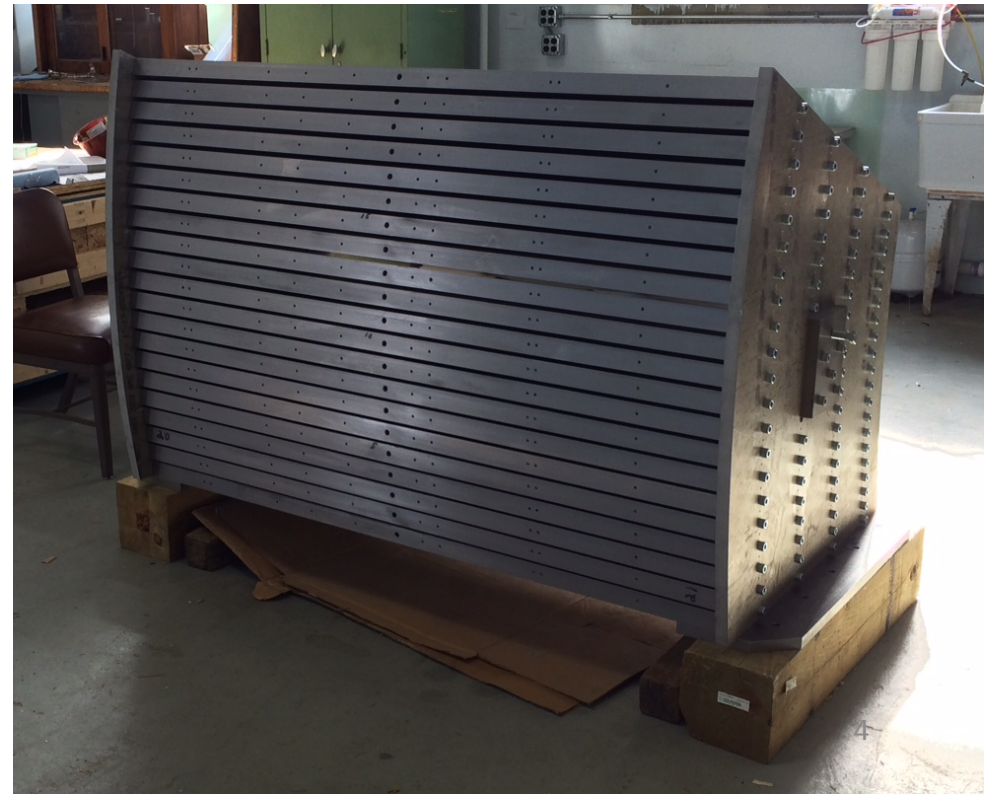


Outer Hcal Assembly Status

- Steel plates stacked
- Tight spaces checked with “skinny” tiles...okay

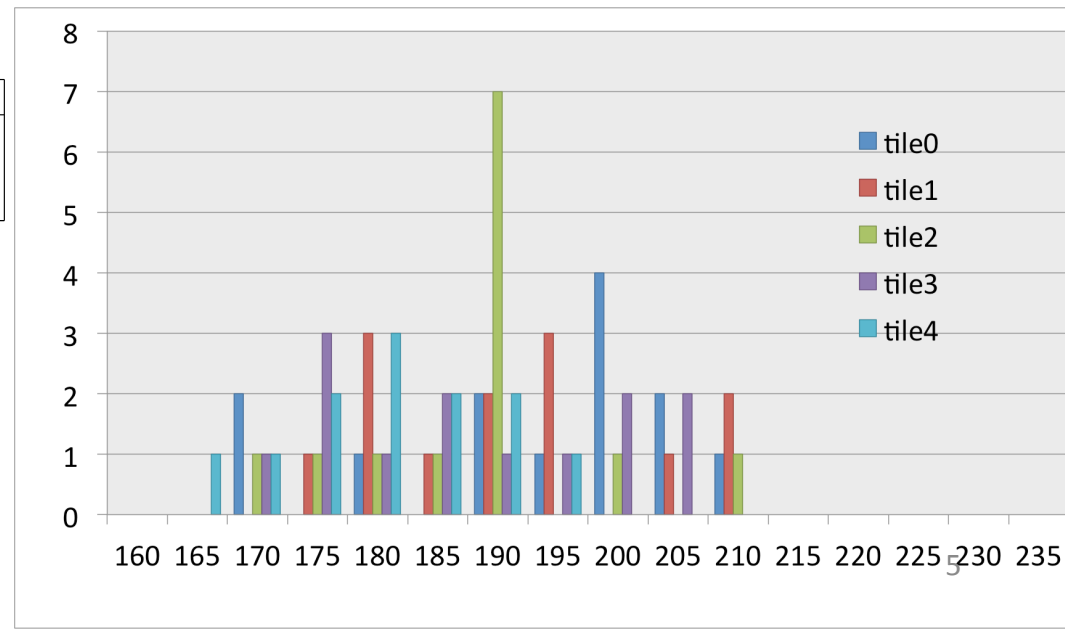
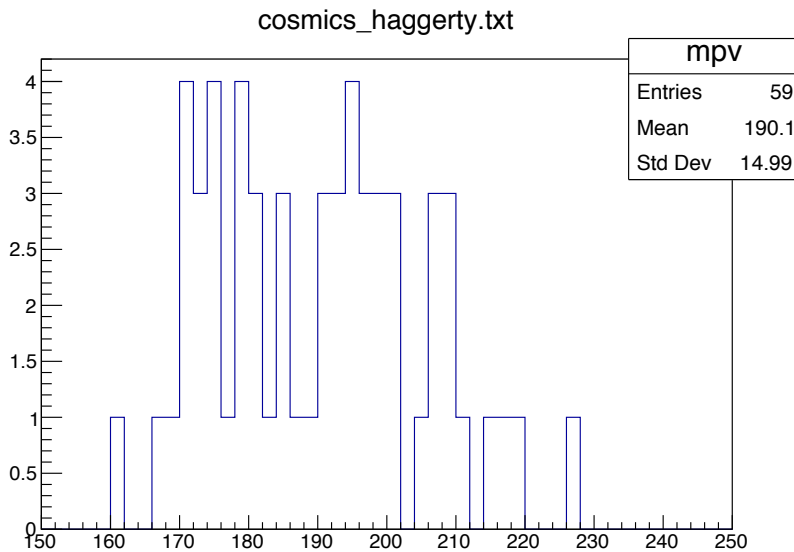
Hcal Outer Steel Stack Gap Measurements

		4	5	6		
<div>TOP</div>						
		1	2	3		
upstream						
** Gap #1 is on the bottom						
		Measurement Point				
Gap #	1	2	3	4	5	6
1	9.03	9.05	8.85	8.83	8.83	8.62
2	8.47	8.35	8.44	8.44	8.33	8.40
3	9.07	9.03	8.90	8.77	8.85	8.87
4	8.76	8.88	8.95	9.13	9.05	8.99
5	8.26	8.20	8.37	8.30	8.34	8.47
6	9.30	9.35	9.16	8.74	8.79	8.78
7	8.28	8.22	8.27	8.78	8.77	8.71
8	9.11	9.08	9.09	8.83	9.00	8.80
9	9.10	9.33	9.06	8.98	9.01	8.79
10	8.58	8.34	8.20	8.73	8.57	8.60
11	9.13	9.20	9.23	8.97	9.14	9.23
12	8.57	8.43	8.49	8.59	8.26	8.37
13	9.19	9.38	9.33	9.18	9.26	9.08
14	8.66	8.56	8.48	8.66	8.61	8.54
15	8.97	9.04	9.13	8.86	8.88	8.79



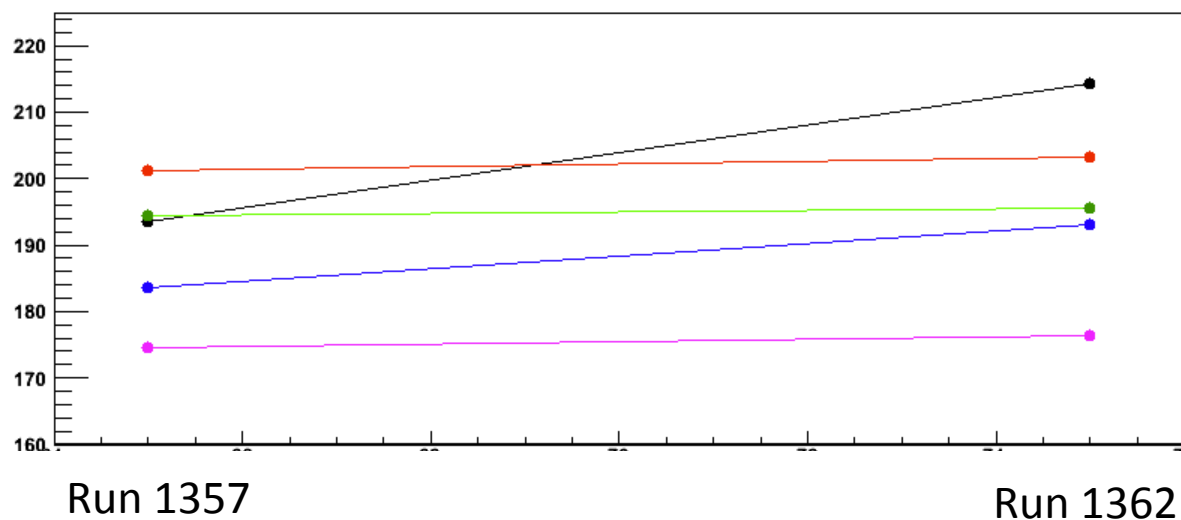
Cosmics Summary for the Inner

- Do we need to sort tiles based on light?
 - Will need to see what fits where...
 - Sorted by SiPM
- ~10% variation



Tile under pressure

- Mike applied 5 Tons of pressure to tile IH-1-38 (too thick to fit into assembly) for 3 days
- Compare cosmics from tile in stack before and after Pressure test



Different SiPM
IH-1-37
Crushed Tile
Different tile
IH-1-40

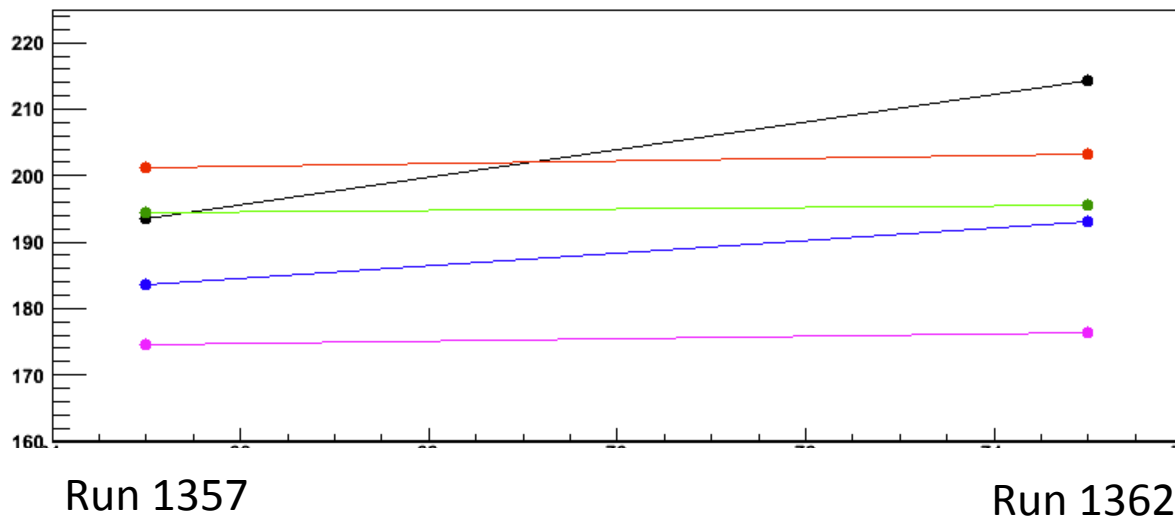
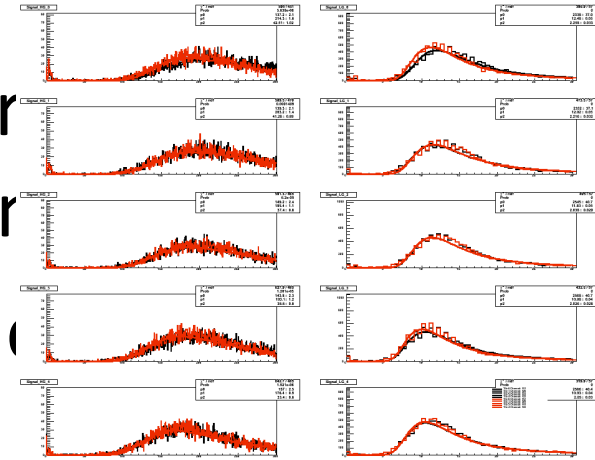
Tile To Do's

- LED plans?
 - In SiPM holder? Drill to white?
- Put tiles into assembly
- Move cosmic test stand to high bay

Backup

Tile under pressure

- Mike applied 5,000 lbs of pressure to IH-1-38 (too thick to fit into assembly)
- Compare cosmics from tile in station after Pressure test



Different SiPM
IH-1-37
Crushed Tile
Different tile
IH-1-40